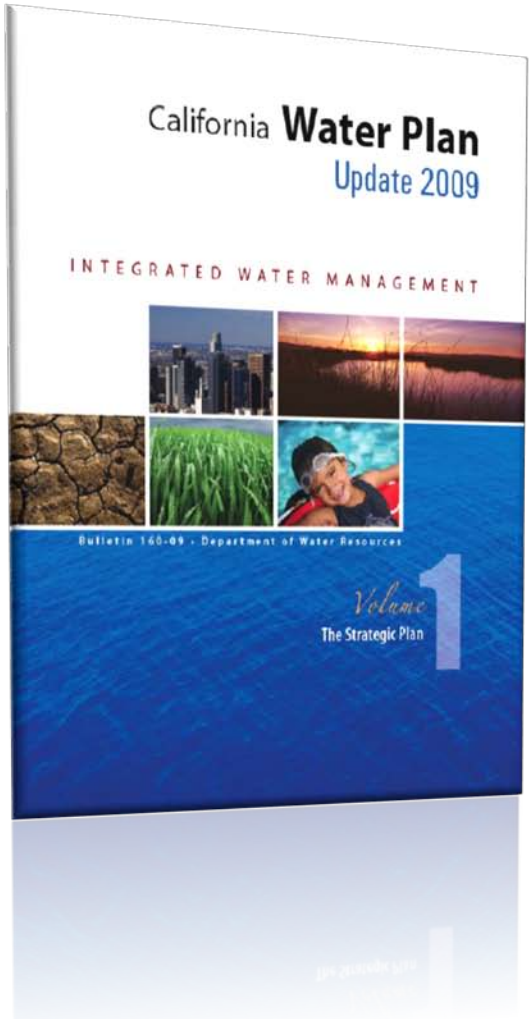
Integrating Water Management

CA Water Plan Public Advisory Committee

April 4, 2012

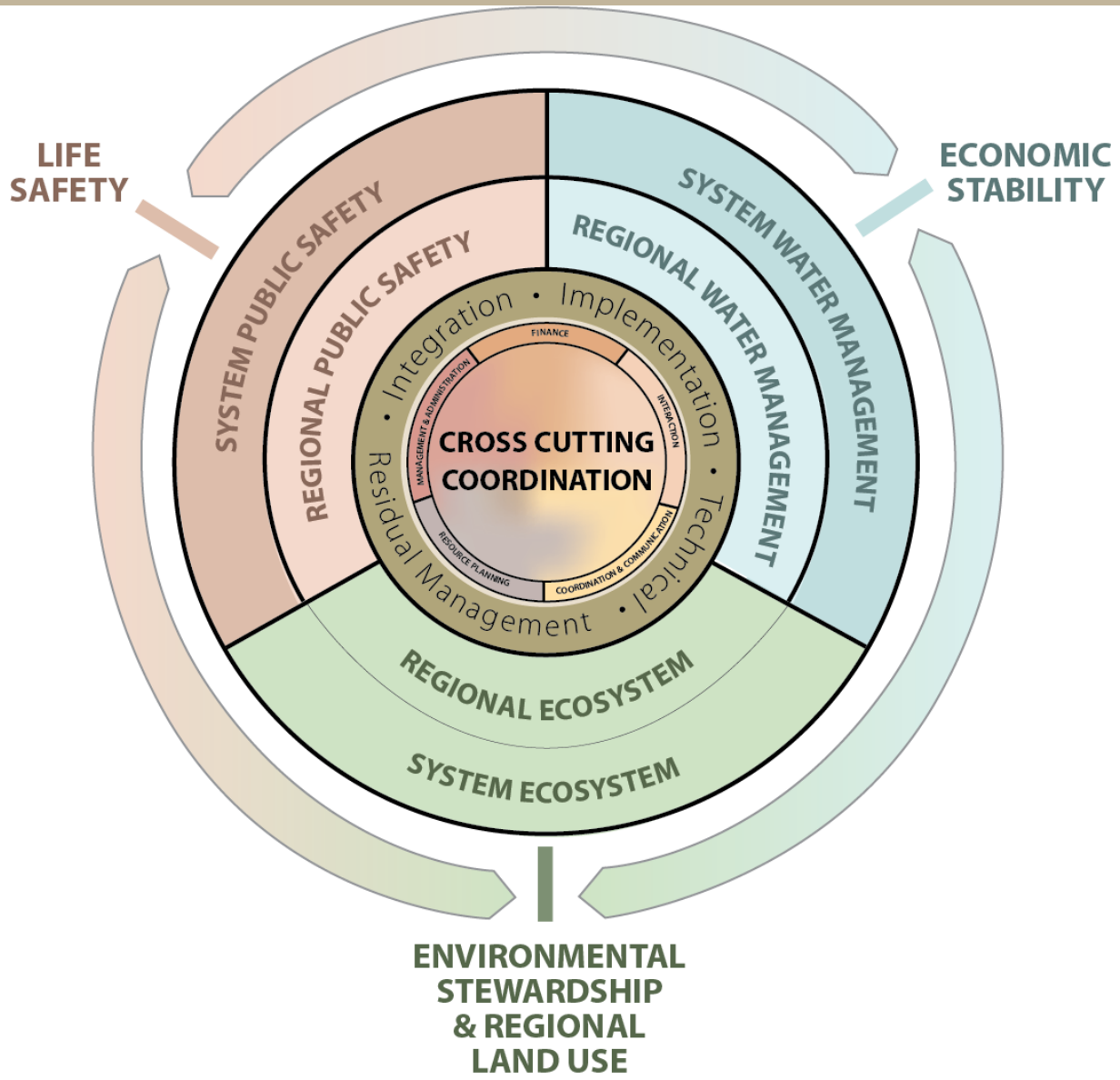
California Water Plan



Key Initiatives:

- Statewide Water Management
- Integrated Regional Water Management

Integrating Water Management



Defining California's Water Challenges

Major system deficiencies put public safety, financial stability and economic well being of the State at risk of flooding.

California's Bay-Delta ecosystem is declining with many fish populations at record lows.

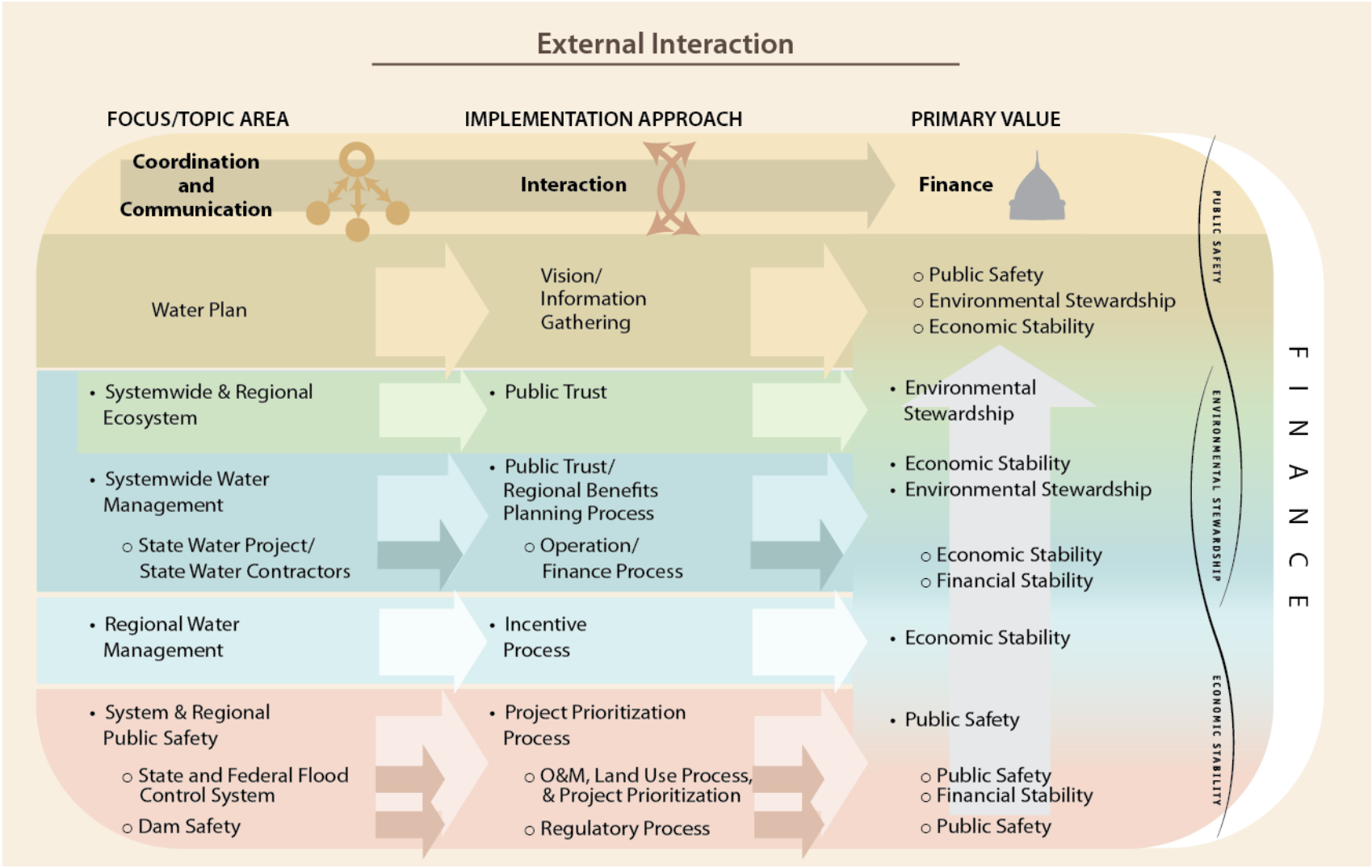
Water supplies from the Delta are less reliable. Aging infrastructure and growing population put more pressure on water systems.

Multi-year drought has further stressed water supplies for all purposes. Reservoirs are low and groundwater levels are declining.

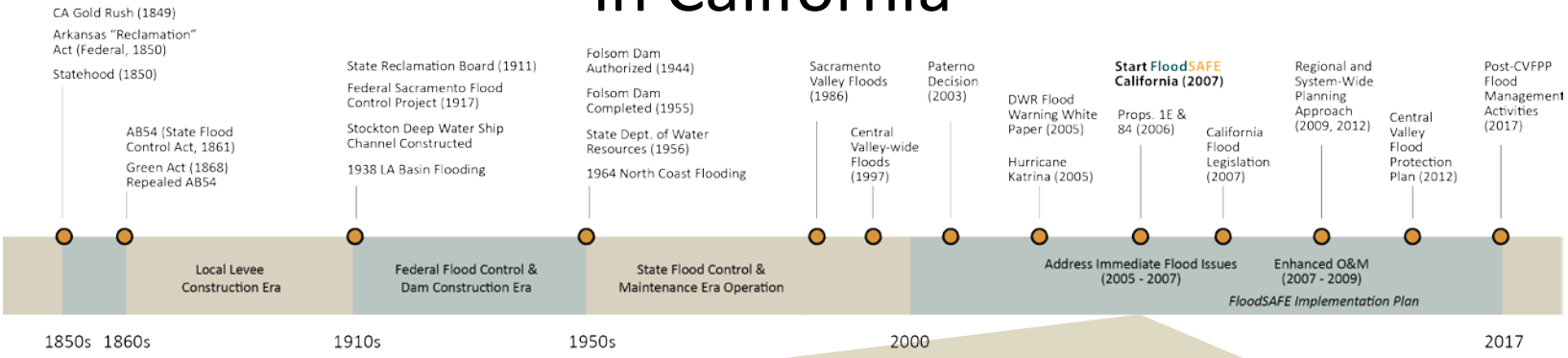
Climate change impacts, including less snowpack, higher flood peaks, and sea level rise, create new uncertainties.

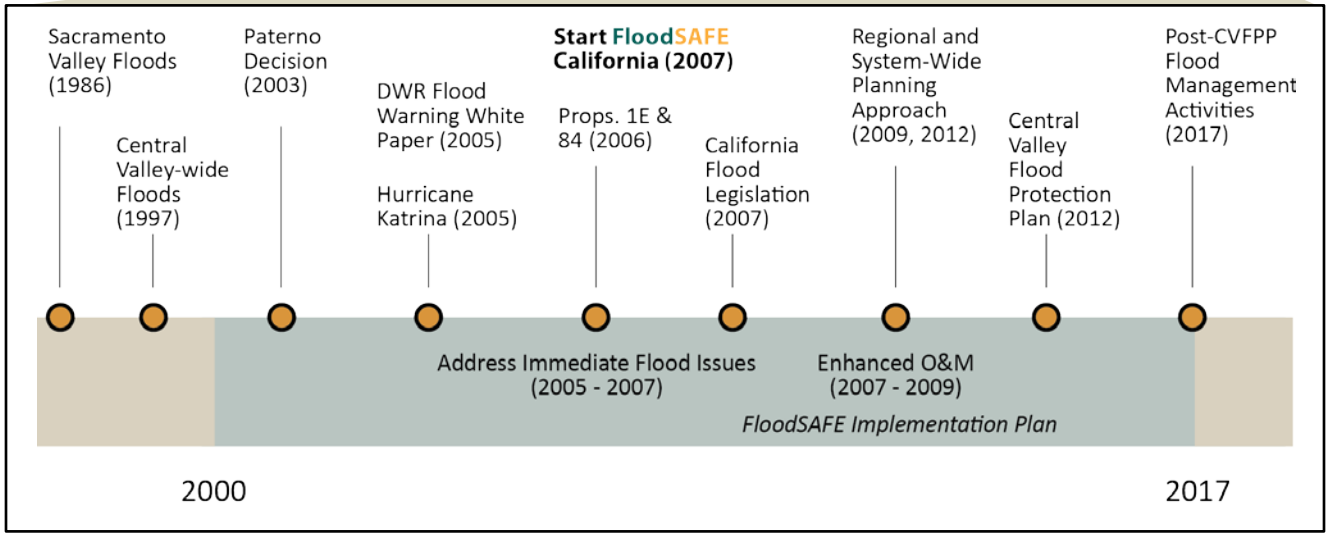
Integrating Water Management

Matching Interaction w/ Focus Area

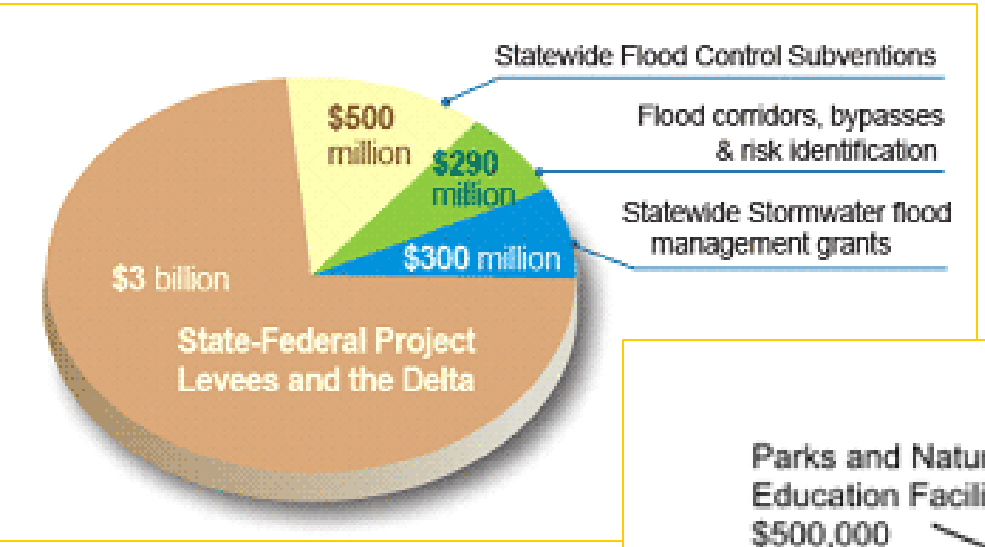


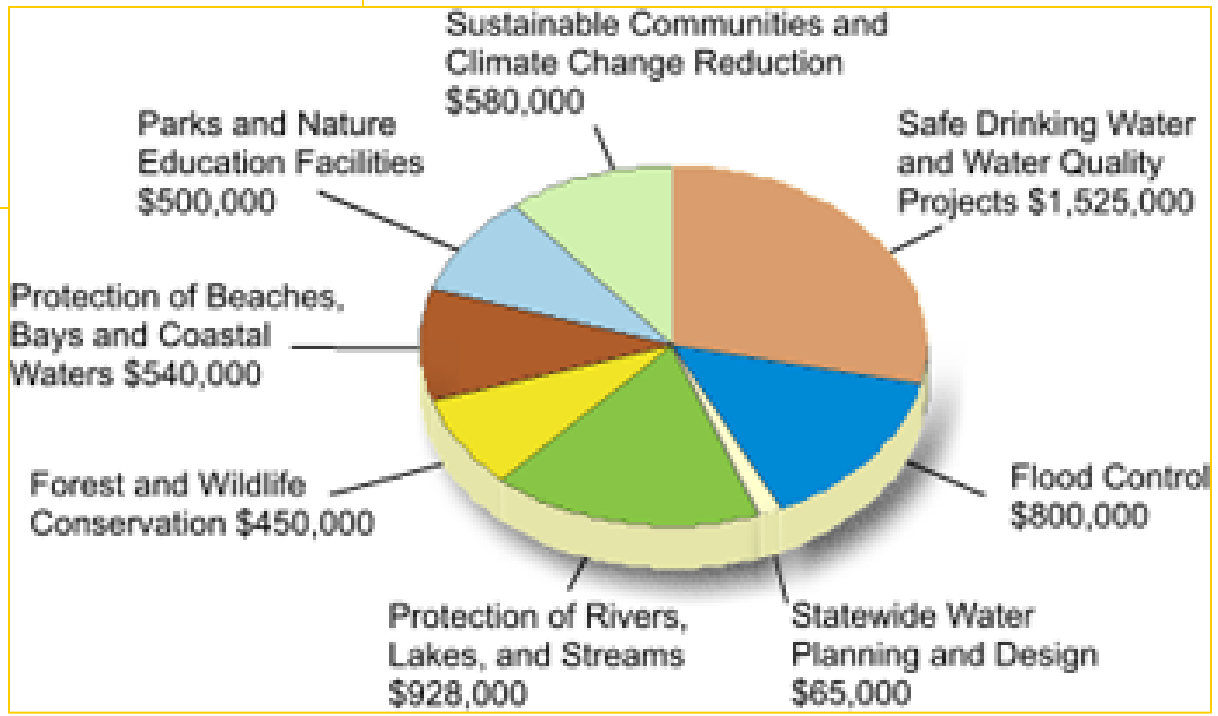
A Brief History of Flood Protection Actions in California





Recent Investments in California Water





IWM's FloodSAFE, is about

Public Safety

- Making communities safe
- Planning ahead to achieve best collaboration
- Emergency planning and response

Environmental Stewardship

- Helping ecosystems thrive
- Creating healthier communities by enhancing the environment
- Responsible and reasonable balance between protecting people and the environment

Economic Stability

- Providing for our families' future
- Protecting businesses and investments
- Enhancing communities

FloodSAFE California Initiative

In 2006 DWR launched the FloodSAFE California Initiative to improve public safety through integrated flood management.

Accomplishments

- ✓ Core Flood Management Programs
- ✓ Regional Projects
- ✓ System-Wide Investments

Integrating Water Management

Risk = Hazard + Exposure + Performance + Consequences

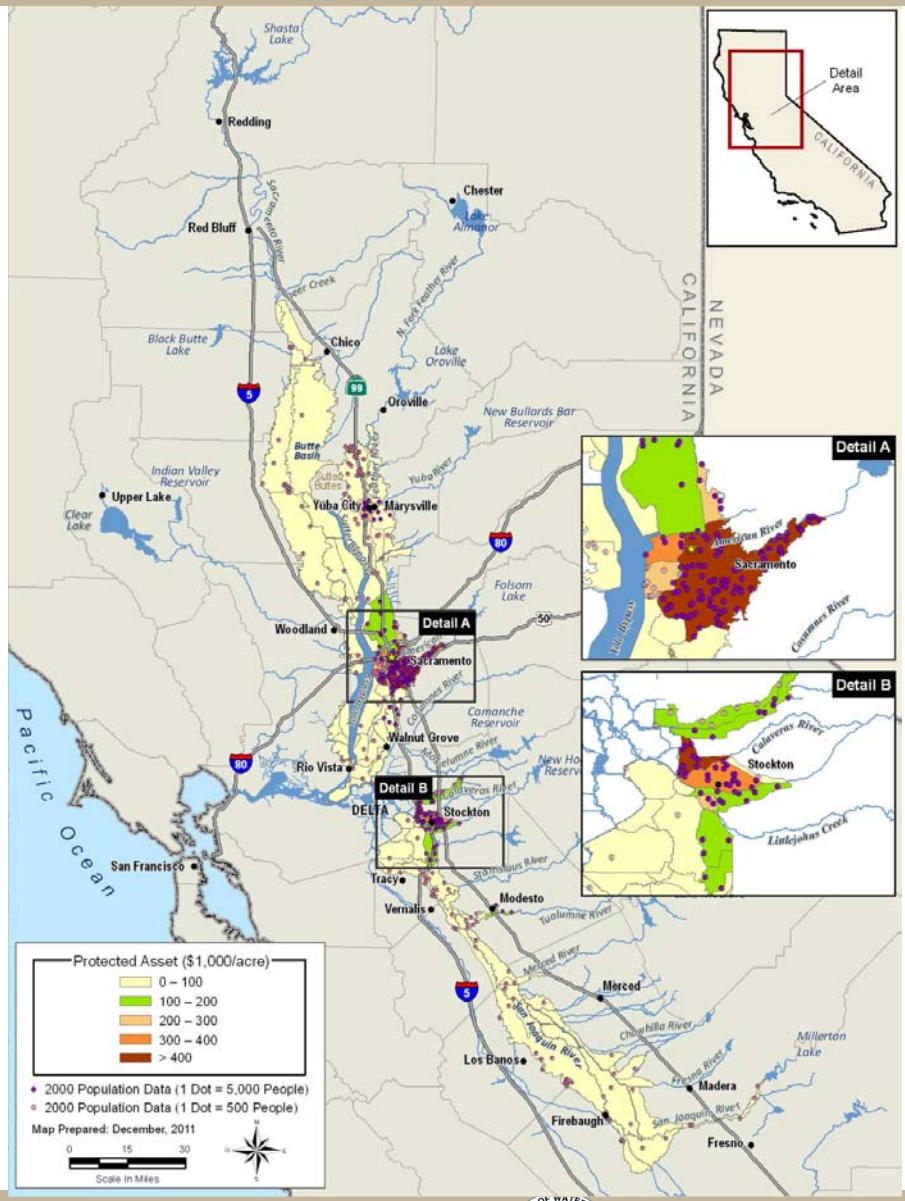
Flood Hazard Types in California

Hazard Characteristics

Characteristic	Alluvial Fans	Banked Rivers / Headwaters	Coastal / Tidal Estuaries	Deep Floodplains
Time to Peak	Hours	Hours	Days	Days
Duration of Flood	Hours	Weeks	Seasonal	Weeks
Area Flooded	Small	Small	Medium	Large
Drainage Area	Small	Medium	Variable	Large
Characteristic Storm	Thunderstorm	Winter	Winter & Spring Tide	Winter & Snow Melt
High Sediment Load	Yes	No	No	No
Man-Made Levees	Rare	Rare	Variable	Common

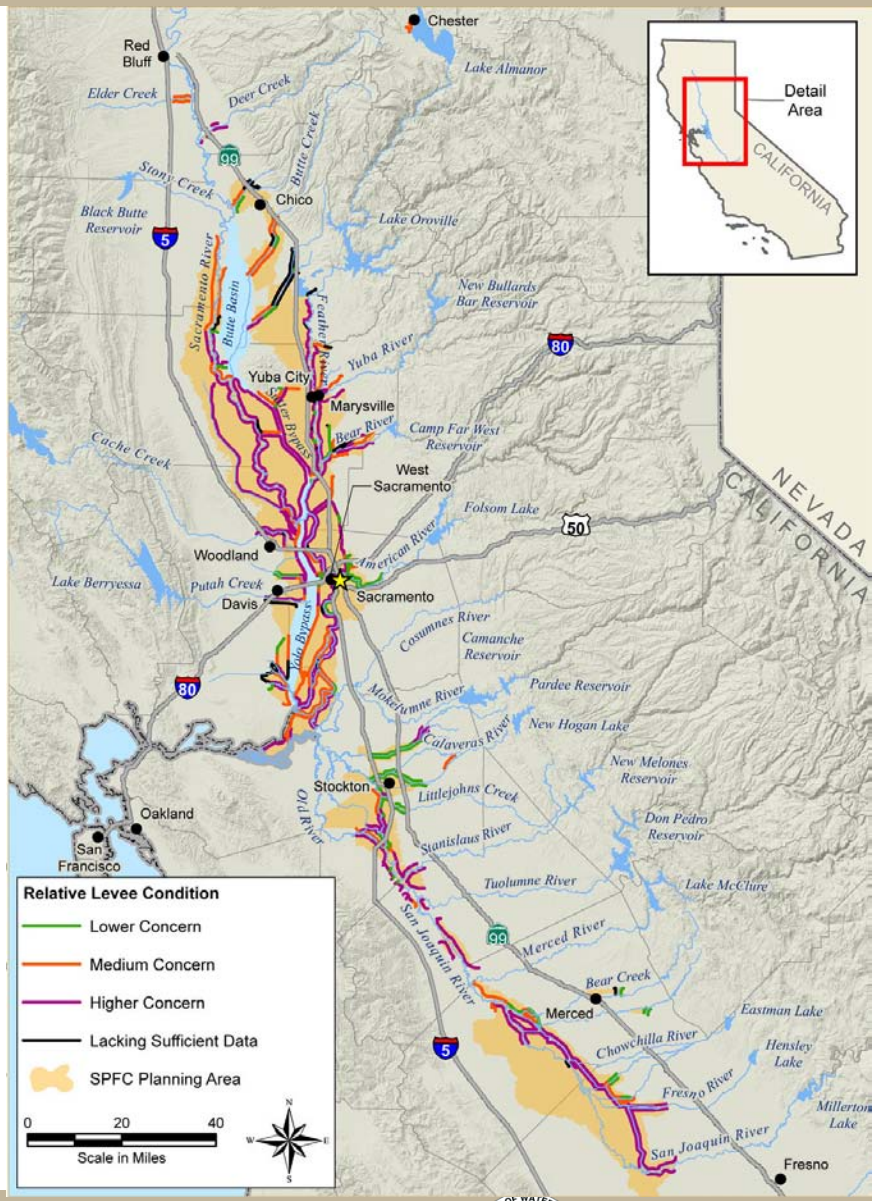
Exposure

- 1 million people
- $69B assets
  - Structures
  - Crops
- Urban, Small, & Rural-Ag Communities
- Critical Habitat
  (Terrestrial, Riparian, Tidal, Aquatic, etc.)

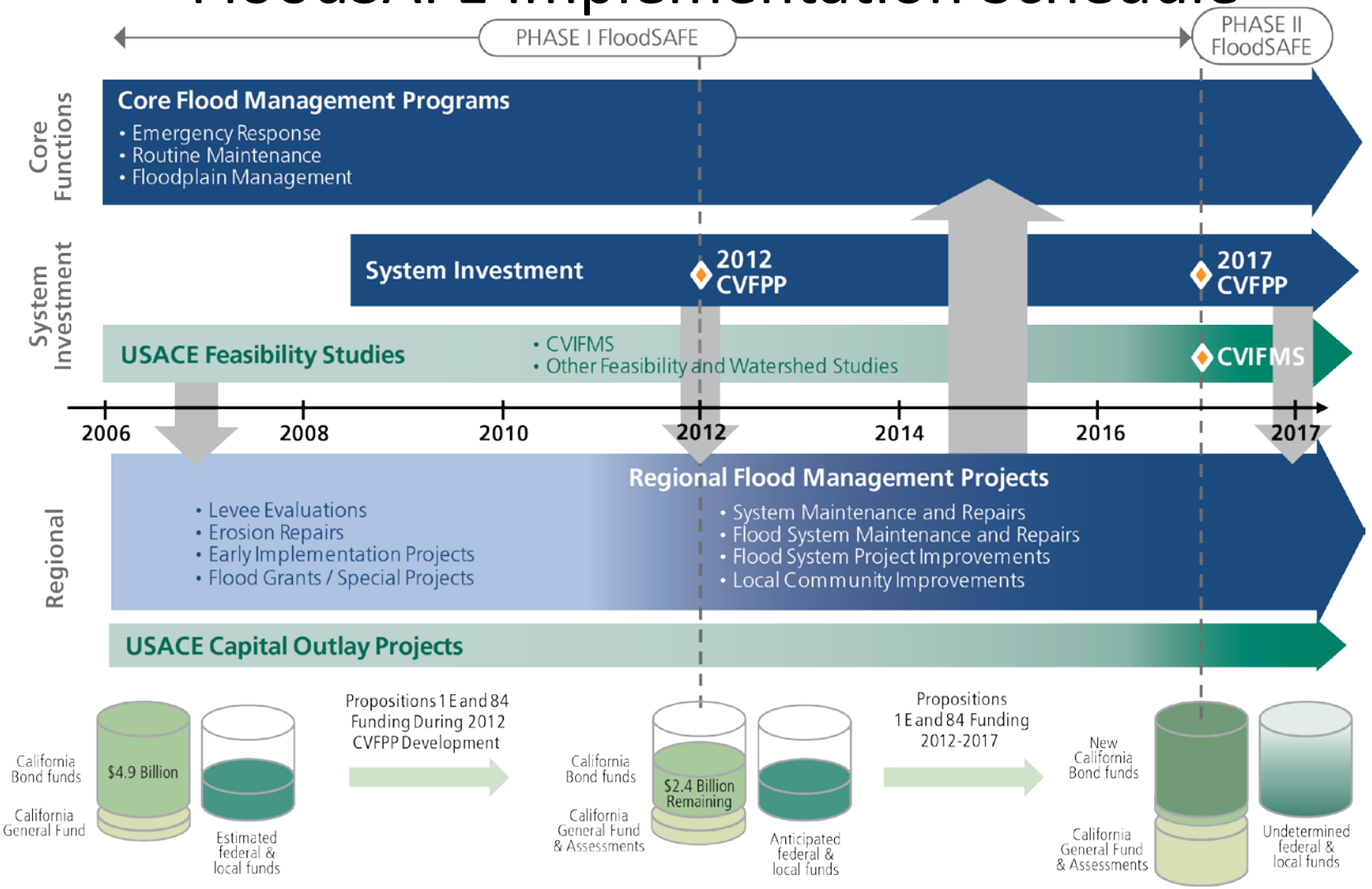


Performance

- ~50% of 300 miles of SPFC urban levees do not meet design criteria
- ~60% of 1,200 miles of SPFC non-urban levees have high potential for failure



FloodSAFE Implementation Schedule



Systemwide Investment CV Flood Risk

High-Level Vision

Reconnaissance

Feasibility

Project-Specific

On-the-Ground Projects